

IN THE CLAIMS:

1. (Original) A method for correcting height errors on a substrate, comprising altering the density of a region selected from the group consisting of at least a portion of said substrate and at least a portion of a coating on said substrate, wherein an expansion or contraction of said region is produced such that the height of said region changes by an amount needed to mitigate surface height error.

2. (Original) The method of claim 1, wherein said coating comprises a multilayer.

3. (Original) The method of claim 2, wherein said multilayer comprises a Mo/Si multilayer.

4. (Original) The method of claim 2, wherein said expansion or contraction results from a reaction selected from the group consisting of (i) interdiffusion and (ii) a chemical reaction of neighboring layers of said multilayer, wherein said reaction results in a net change in density, which results in a change in height of a surface of at least one layer of said multilayer.

5. (Original) The method of claim 1, wherein the step of altering the density of a region includes depositing energy into said region.

6. (Original) The method of claim 1, wherein the step of altering the density of a region includes depositing thermal energy into said region.

7. (Original) The method of claim 6, wherein the step of depositing thermal energy includes depositing laser energy.

8. (Original) The method of claim 6, wherein the step of depositing thermal energy includes bombarding said region with an electron beam.

9. (Original) The method of claim 6, wherein the step of depositing thermal energy includes bombarding said region with an ion beam.

10. (Original) The method of claim 1, wherein the step of altering the density comprises bombarding said region with atoms.

11. (Original) The method of claim 7, wherein the step of depositing laser energy is carried out with an excimer laser.

12. (Original) The method of claim 1, wherein expansion or contraction of said region is localized to at least one area delineated by spatial extent.

13. (Original) The method of claim 12, wherein said at least one area comprises pixels

14. (Original) The method of claim 1, wherein the step of altering the density of a region is controlled as a function of time.

15. (Original) The method of claim 6, wherein the step of depositing thermal energy is controlled as a function of time wherein a desired height change is proportional to the duration of the step of depositing thermal energy.

16. (Original) The method of claim 5, wherein the step of altering the density of a region is controlled as a function of the intensity of energy deposited into said region.

17. (Original) The method of claim 13, wherein said pixels comprise an abrupt spatial boundary.

18. (Original) The method of claim 17, wherein said abrupt spatial boundary comprises a geometric shape.

19. (Original) The method of claim 13, wherein said pixels comprise a non-abrupt spatial boundary.

20-34. (Canceled)